CLAIMS

- 1. An aptamer-probe complex for detecting the presence of a target molecule, said complex comprising:
- an aptamer moiety which is able to bind to an indicator protein and change the properties of said indicator; and
- a probe moiety which is able to bind to the target molecule, wherein said aptamer moiety and said probe moiety are combined in such a manner that the binding mode between the aptamer moiety and the indicator protein changes when the probe moiety binds to the target molecule.
- 2. The complex according to claim 1, wherein the target molecule is a nucleic acid, and the probe moiety of the aptamer-probe complex is an oligonucleotide capable of hybridizing with the nucleic acid.
- 3. The complex according to claim 1, wherein the target molecule is a protein or a small molecule, and the probe moiety of the aptamer-probe complex is an aptamer capable of binding to the protein or the small molecule.
- 4. The complex according to claim 3, wherein the indicator protein is an enzyme.
- 5. The complex according to claim 4, wherein the enzyme is thrombin.
- 6. The complex according to claim 1, wherein binding between the aptamer moiety and the indicator protein becomes stronger when the probe moiety binds to the target molecule.
- 7. The complex according to claim 1, wherein binding between the aptamer moiety and the indicator protein becomes weaker when the probe moiety binds to the target molecule.

- 8. The complex according to claim 1, wherein the target molecule is Salmonella bacteria gene, SARS virus gene or a portion thereof.
- 9. A kit for detecting the presence of a target protein, comprising the aptamer-probe complex according to any of claims 1 to 8.
- 10. A method for detecting the presence of a target molecule in a sample, comprising:

preparing an aptamer-probe complex comprising an aptamer moiety which is able to bind to an indicator protein and change the properties of said indicator protein, and a probe moiety which is able to bind to the target molecule, wherein said aptamer moiety and said probe moiety are combined in such a manner that the binding mode between the aptamer moiety and the indicator protein changes when the probe moiety binds to the target molecule;

contacting the sample with the complex; and

detecting the change in the properties of the indicator protein as an indicator of the presence of the target molecule in the sample.

- 11. The method according to claim 10, wherein the target molecule is a nucleic acid, and the probe moiety of the aptamer-probe complex is an oligonucleotide capable of hybridizing with the nucleic acid.
- 12. The method according to claim 10, wherein the target molecule is a protein or a small molecule, and the probe moiety of the aptamer-probe complex is an aptamer capable of binding to the protein or the small molecule.
- 13. The method according to claim 10, wherein the indicator protein is an enzyme.
- 14. The method according to claim 13, wherein the change in the

- enzyme activity of the indicator protein is measured by a spectrophotometric technique.
- 15. The method according to claim 13, wherein the change in the enzyme activity of the indicator protein is measured by an electrochemical technique.
- 16. The method according to claim 13, wherein the enzyme is thrombin.
- 17. The method according to claim 10, wherein binding between the aptamer moiety and the indicator protein becomes stronger when the probe moiety binds to the target molecule.
- 18. The method according to claim 10, wherein binding between the aptamer moiety and the indicator protein becomes weaker when the probe moiety binds to the target molecule.
- 19. The method according to claim 10, wherein the target molecule is Salmonella bacteria gene, SARS virus gene or a portion thereof.